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=> file agricola biosis embase caplus

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FULL ESTIMATED COST	0.21	0.21

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FILE 'BIOSIS' ENTERED AT 11:53:30 ON 04 FEB 2004
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=> s tomato and isoprenoid and DXP(w)synthase
L1 4 TOMATO AND ISOPRENOID AND DXP(W) SYNTHASE

=> d l1 1-4 ti

L1 ANSWER 1 OF 4 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN
TI 1-Deoxy-D-xylulose 5-phosphate reductoisomerase and plastid ***isoprenoid*** biosynthesis during ***tomato*** fruit ripening.

L1 ANSWER 2 OF 4 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI 1-Deoxy-D-xylulose 5-phosphate reductoisomerase and plastid ***isoprenoid*** biosynthesis during ***tomato*** fruit ripening.

L1 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
TI 1-deoxy-D-xylulose 5-phosphate reductoisomerase and plastid ***isoprenoid*** biosynthesis during ***tomato*** fruit ripening

L1 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
TI Manipulating ***isoprenoid*** expression in cells with prokaryotic 1-deoxy-d-xylulose-5-phosphate synthase

=> d l1 3-4 ibib ab

L1 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:683615 CAPLUS

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000044912	A1	20000803	WO 2000-GB263	20000128
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2360334	AA	20000803	CA 2000-2360334	20000128
EP 1144652	A1	20011017	EP 2000-901257	20000128
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002535970	T2	20021029	JP 2000-596152	20000128

PRIORITY APPLN. INFO.: GB 1999-1902 A 19990128
WO 2000-GB263 W 20000128

AB There is disclosed a method of manipulating ***isoprenoid*** expression in a cell or organism having a mevalonate independent isopentyl diphosphate synthesizing pathway, which method comprises altering the activity of the enzyme 1-deoxy-D-xylulose-5-phosphate synthase (DXPS), or a functional equiv., deriv. or bioprecursor thereof. Also disclosed is a transgenic cell, tissue or organism having a mevalonate independent IPP biosynthetic pathway which cell, tissue or organism comprises at least one transgene capable of expressing DXPS or a functional equiv., deriv. or bioprecursor thereof. A method of screening for compds. which modulate ***isoprenoid*** activity or expression, and use of such compds. as antibacterial drugs or herbicides, are also claimed. Isopentenyl diphosphate (IPP) acts as the common, five-carbon building block in the biosynthesis of all ***isoprenoids*** . The first reaction of IPP biosynthesis in Escherichia coli is the formation of 1-deoxy-d-xylulose-5-phosphate, catalyzed by 1-deoxy-d-xylulose-5-phosphate synthase (DXPS). E. coli engineered to produce lycopene, was transformed with dxps genes cloned from Bacillus subtilis and Synechocystis sp. 6803. Increases in lycopene levels were obsd. in strains expressing exogenous DXPS compared to controls. The recombinant strains also exhibited elevated levels of ubiquinone-8. These increases corresponded with enhanced ***DXP*** ***synthase*** activity in the recombinant E. coli strains. Transformation of ***tomato*** plant is also described.

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
=> tomato and transfor? and phytoene
TOMATO IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s tomato and transfor? and phytoene
L2          59 TOMATO AND TRANSFOR? AND PHYTOENE

=> duplicate remove l2
DUPLICATE PREFERENCE IS 'AGRICOLA, BIOSIS, EMBASE, CAPLUS'
KEEP DUPLICATES FROM MORE THAN ONE FILE?  Y/(N):n
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=> s transform? and coli and dxp and synthase
L5 14 TRANSFORM? AND COLI AND DXP AND SYNTHASE

=> duplicate remove l5
DUPLICATE PREFERENCE IS 'AGRICOLA, BIOSIS, EMBASE, CAPLUS'
KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n
PROCESSING COMPLETED FOR L5
L6 8 DUPLICATE REMOVE L5 (6 DUPLICATES REMOVED)

=> d l6 1-8 ti

L6 ANSWER 1 OF 8 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 1
TI The mevalonate-independent pathway is expressed in ***transformed*** roots of Artemisia annua and regulated by light culture age.

L6 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
TI Engineering Escherichia ***coli*** for the synthesis of taxadiene, a key intermediate in the biosynthesis of taxol

L6 ANSWER 3 OF 8 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN DUPLICATE 2
TI Metabolic engineering of the nonmevalonate isopentenyl diphosphate synthesis pathway in Escherichia ***coli*** enhances lycopene production.

L6 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
TI Manipulating isoprenoid expression in cells with prokaryotic 1-deoxy-d-xylulose-5-phosphate ***synthase***

L6 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
TI Low-Copy Plasmids can Perform as Well as or Better Than High-Copy Plasmids for Metabolic Engineering of Bacteria

L6 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
TI Studies on the nonmevalonate pathway

L6 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
TI Enzymes useful for modifying the production of isopentenyl pyrophosphate, dimethylallyl pyrophosphate and/or isoprenoids

L6 ANSWER 8 OF 8 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 3
TI Expression of prokaryotic 1-deoxy-D-xylulose-5-phosphatases in Escherichia ***coli*** increases carotenoid and ubiquinone biosynthesis.

=> d l6 4 8 ibib ab

L6 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:535291 CAPLUS
DOCUMENT NUMBER: 133:130772
TITLE: Manipulating isoprenoid expression in cells with

DUPLICATE 3
ACCESSION NUMBER: 1999:237140 BIOSIS
DOCUMENT NUMBER: PREV199900237140
TITLE: Expression of prokaryotic 1-deoxy-D-xylulose-5-phosphatases in Escherichia ***coli*** increases carotenoid and ubiquinone biosynthesis.
AUTHOR(S): Harker, M.; Bramley, P. M. [Reprint author]
CORPORATE SOURCE: School of Biological Sciences, Royal Holloway, University of London, Egham, Surrey, TW20 0EX, UK
SOURCE: FEBS Letters, (April 1, 1999) Vol. 448, No. 1, pp. 115-119. print.
CODEN: FEBLAL. ISSN: 0014-5793.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 17 Jun 1999
Last Updated on STN: 17 Jun 1999

AB Isopentenyl diphosphate (IPP) acts as the common, five-carbon building block in the biosynthesis of all isoprenoids. The first reaction of IPP biosynthesis in Escherichia ***coli*** is the formation of 1-deoxy-D-xylulose-5-phosphate, catalysed by 1-deoxy-D-xylulose-5-phosphate ***synthase*** (***DXPS***). E. ***coli*** engineered to produce lycopene, was ***transformed*** with ***dxps*** genes cloned from Bacillus subtilis and Synechocystis sp. 6803. Increases in lycopene levels were observed in strains expressing exogenous ***DXPS*** compared to controls. The recombinant strains also exhibited elevated levels of ubiquinone-8. These increases corresponded with enhanced ***DXP*** ***synthase*** activity in the recombinant E. ***coli*** strains.

=> s tomato and transform? and dxp and synthase
L7 1 TOMATO AND TRANSFORM? AND DXP AND SYNTHASE

=> d l7 1 ibib ab

L7 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:535291 CAPLUS
DOCUMENT NUMBER: 133:130772
TITLE: Manipulating isoprenoid expression in cells with prokaryotic 1-deoxy-d-xylulose-5-phosphate ***synthase***
INVENTOR(S): Bramley, Peter Michael; Harker, Mark
PATENT ASSIGNEE(S): Royal Holloway and Bedford New College, UK
SOURCE: PCT Int. Appl., 52 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000044912	A1	20000803	WO 2000-GB263	20000128

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,

SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM,
AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

CA 2360334	AA	20000803	CA 2000-2360334	20000128
EP 1144652	A1	20011017	EP 2000-901257	20000128
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002535970	T2	20021029	JP 2000-596152	20000128

PRIORITY APPLN. INFO.: GB 1999-1902 A 19990128
WO 2000-GB263 W 20000128

AB There is disclosed a method of manipulating isoprenoid expression in a cell or organism having a mevalonate independent isopentyl diphosphate synthesizing pathway, which method comprises altering the activity of the enzyme 1-deoxy-D-xylulose-5-phosphate ***synthase*** (***DXPS***), or a functional equiv., deriv. or bioprecursor thereof. Also disclosed is a transgenic cell, tissue or organism having a mevalonate independent IPP biosynthetic pathway which cell, tissue or organism comprises at least one transgene capable of expressing ***DXPS*** or a functional equiv., deriv. or bioprecursor thereof. A method of screening for compds. which modulate isoprenoid activity or expression, and use of such compds. as antibacterial drugs or herbicides, are also claimed. Isopentenyl diphosphate (IPP) acts as the common, five-carbon building block in the biosynthesis of all isoprenoids. The first reaction of IPP biosynthesis in Escherichia coli is the formation of 1-deoxy-d-xylulose-5-phosphate, catalyzed by 1-deoxy-d-xylulose-5-phosphate ***synthase*** (***DXPS***). E. coli engineered to produce lycopene, was ***transformed*** with ***dxps*** genes cloned from Bacillus subtilis and Synechocystis sp. 6803. Increases in lycopene levels were obsd. in strains expressing exogenous ***DXPS*** compared to controls. The recombinant strains also exhibited elevated levels of ubiquinone-8. These increases corresponded with enhanced ***DXP*** ***synthase*** activity in the recombinant E. coli strains. ***Transformation*** of ***tomato*** plant is also described.

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
=> tomato and dxr and transform?
TOMATO IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s tomato and dxr and transform?
L8            3 TOMATO AND DXR AND TRANSFORM?

=> d l8 1-3

L8   ANSWER 1 OF 3  CAPLUS  COPYRIGHT 2004 ACS on STN
AN   2003:610132  CAPLUS
DN   139:175849
TI   Plant genes for sequence homologs of methyltransferases of tocopherol
     biosynthesis and their use in engineering plant tocopherol profiles
IN   Norris, Susan R.; Lincoln, Kim; Stein, Joshua C.; Valentin, Henry E.; Van
     Eenennaam, Alison
```

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PI   WO 2002018617      A2   20020307       WO 2001-US27420  20010904
     WO 2002018617      A3   20030522
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL,
             PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG,
             US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
             DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
             BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     US 2002142408      A1   20021003       US 2001-938956   20010824
     US 2003003528      A1   20030102       US 2001-941947   20010829
     AU 2001088699      A5   20020313       AU 2001-88699    20010904
     EP 1328639         A2   20030723       EP 2001-968453   20010904
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
     NO 2003000343      A    20030403       NO 2003-343      20030123
PRAI US 2000-229858P    P    20000901
     US 2000-229907P    P    20000901
     WO 2001-US27420    W    20010904


=> s tomato and phytoene  and transform?
L9          59 TOMATO AND PHYTOENE AND TRANSFORM?

=> s tomato and phytoene and transform?
L10         59 TOMATO AND PHYTOENE AND TRANSFORM?

=> duplicate remove l10
DUPLICATE PREFERENCE IS 'AGRICOLA, BIOSIS, EMBASE, CAPLUS'
KEEP DUPLICATES FROM MORE THAN ONE FILE?  Y/(N):n
PROCESSING COMPLETED FOR L10
L11          37 DUPLICATE REMOVE L10 (22 DUPLICATES REMOVED)

=> d l11 11-21 ibib ab

L11  ANSWER 11 OF 37  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         2000:606017  CAPLUS
DOCUMENT NUMBER:          133:262033
TITLE:                    Metabolic engineering of astaxanthin production in
                          tobacco flowers
AUTHOR(S):                Mann, Varda; Harker, Mark; Pecker, Iris; Hirschberg,
                          Joseph
CORPORATE SOURCE:         Department of Genetics, The Life Sciences Inst., The
                          Hebrew Univ. of Jerusalem, Jerusalem, 91904, Israel
SOURCE:                   Nature Biotechnology (2000), 18(8), 888-892
                          CODEN: NABIF9; ISSN: 1087-0156
PUBLISHER:                Nature America Inc.
DOCUMENT TYPE:            Journal
LANGUAGE:                 English
AB   The carotenoid biosynthesis pathway in tobacco (Nicotiana tabacum) to
     produce astaxanthin, a red pigment of considerable economic value, was
     modified by metabolic engineering.  To alter the carotenoid pathway in
     chromoplasts of higher plants, the cDNA of the gene CrtO from the alga
     Haematococcus pluvialis, encoding .beta.-carotene kelolase, was
     transferred to tobacco under the regulation of the   ***tomato***   Pds (
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